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10/762,067	01/20/2004	Ozgur C. Leonard	15437-0597	4599

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EXAMINER	
WAI, ERIC CHARLES	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/762,067	LEONARD ET AL.	
	Examiner	Art Unit	
	ERIC C. WAI	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,12-19,21-34 and 36-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12-19,21-34 and 36-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/20/09,10/24/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-10, 12-19, 21-34, and 36-39 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-10, 12-19, 21-34, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kassan et al. (US Pat No. 7,194,439) in view of Armstrong et al (US PG Pub No. 2002/0156824 A1).

4. Armstrong was disclosed in IDS 10/24/2008.

5. Regarding claim 1, Kassan teaches a machine-implemented method, comprising:

in response to an ending of execution of a first process that executed in a first virtual operating system environment (VOSE) of a plurality of VOSEs, determining in which VOSE of the plurality of VOSEs the first process executed (col 1 lines 28-46, wherein logical partitions are equivalent to VOSEs; col 4 lines 46-59, wherein an LOS can have multiple partitions); and

in response to determining that the first process executed in the first VOSE, recording, in a first system accounting log file (SALF), first accounting information about the first process (col 1 lines 44-60).

6. Kassan does not teach that the SALF is stored in a first file system partition associated with the first VOSE. Kassan teaches that the information is recorded in a system management facility data file (col 1 lines 61-64). Kassan also teaches that sometimes the LOS performs the recording of information (col1 lines 36-42). It would have been obvious to one of ordinary skill in the art at the time of the invention that the SALF be stored in a first file system partition associated with the first VOSE. One would be motivated by the desire to store accounting information pertaining to the first VOSE on the first VOSE.

7. Kassan also does not teach that the plurality of VOSEs are controlled by a single operating system kernel instance. Armstrong teaches the use of a logically partitioned computer system wherein a hypervisor is used to enforce and configure the system ([0025]). Armstrong further teaches that the hypervisor consists of machine management code ([0035]). Since the hypervisor performs the management of memory, files, I/O, and allocates system resources ([0034]), it is a kernel according to Microsoft Computer Dictionary ("kernel", 5th Edition 2002).

8. It would have been obvious to one of ordinary skill in the art at the time of the invention, to modify Kassan to include some type of management tool such as a hypervisor that manages the control of the plurality of VOSEs. One would be motivated

by the desire to provide some way of allowing system administrators to configure the system ([0025]).

9. Regarding claim 2, Kassan teaches further comprising:

in response to determining that the first process executed in the first VOSE, determining, based on first accounting settings that are associated with the first VOSE, one or more specified accounting information aspects of a plurality of accounting information aspects (col 1 lines 47-51);

wherein recording the first accounting information comprises recording aspects of accounting information that correspond to the one or more specified accounting information aspects (col 1 lines 61-64).

10. Regarding claims 3-4, Kassan and Armstrong do not teach further comprising:

in response to an invocation of an accounting settings updating function by a second process that is executing in the first VOSE, determining in which VOSE of the plurality of VOSEs the second process is executing; and

in response to determining that the second process is executing in the first VOSE, updating the first accounting settings;

wherein the accounting settings updating function is implemented by the operating system kernel instance;

wherein processes that do not execute in the first VOSE are prevented from updating the first accounting settings.

11. Kassan does not teach the ability to update accounting settings. Kassan teaches that the type of accounting information applicable to a job can but platform or installation specific (col 1 lines 47-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kassan by including a second process to modify the accounting settings that are logged to the files. One would be motivated by the desire to have the ability to change the type of information that is stored.

12. Regarding claim 5, Kassan and Armstrong do not teach that the first SALF is not accessible by any processes that execute in any VOSE other than the first VOSE. However, it would have been obvious to one of ordinary skill in the art to include such a limitation. One of ordinary skill would realize that Kassan and Armstrong are directed to the partitioning or separation of different operating systems environment. Therefore, only processes executing in the first VOSE would have access to the SALF.

13. Regarding claim 6, Kassan further teaches comprising:

in response to an ending of execution of a second process that executed in a second VOSE of the plurality of VOSEs, determining in which VOSE of the plurality of VOSEs the second process executed (col 1 lines 28-42, wherein information relating to all processes executing on the system is recorded); and

in response to determining that the second process executed in the second VOSE, recording, in a SALF, second accounting information about the second process (col 1 lines 61-64);

wherein the first VOSE is separate from the second VOSE (col 1 lines 28-46, wherein logical partitions are equivalent to VOSEs; col 4 lines 46-59, wherein an LOS can have multiple partitions).

14. Kassan does not teach that the SALF is stored in a second file system partition associated with the second VOSE. Kassan teaches that the information is recorded in a system management facility data file (col 1 lines 61-64). Kassan also teaches that sometimes the LOS performs the recording of information (col1 lines 36-42). It would have been obvious to one of ordinary skill in the art at the time of the invention that the SALF be stored in a second file system partition associated with the second VOSE. One would be motivated by the desire to store accounting information pertaining to the second VOSE on the second VOSE.

15. Regarding claim 7, Kassan teaches, further comprising:

in response to determining that the first process executed in the first VOSE, determining, based on first accounting settings that are associated with the first VOSE, one or more first specified accounting information aspects of a plurality of accounting information aspects (col 1 36-42, wherein it is inherent that information to be logged be determined); and

in response to determining that the second process executed in the second VOSE, determining, based on second accounting settings that are associated with the second VOSE, one or more second specified accounting information aspects of the

plurality of accounting information aspects (col 1 36-42, wherein it is inherent that information to be logged be determined);

wherein recording the first accounting information comprises recording aspects of accounting information that correspond to the one or more first specified accounting information aspects (col 1 lines 61-64);

wherein recording the second accounting information comprises recording aspects of accounting information that correspond to the one or more second specified accounting information aspects (col 1 lines 61-64).

16. Kassan does not explicitly teach that the one or more first specified accounting information aspects are separate from the one or more second specified accounting information aspects. Kassan does teaches that the type of accounting information applicable to a job can but platform or installation specific (col 1 lines 47-50). Therefore, it would have been obvious to one of ordinary skill that Kassan is capable of specifying separate accounting information.

17. Regarding claim 8, Kassan and Armstrong do not teach further comprising:

in response to an invocation of an accounting settings updating function by a second process that is executing in the first VOSE, determining in which VOSE of the plurality of VOSEs the third process is executing;

in response to determining that the third process is executing in the first VOSE, updating the first accounting settings;

in response to an invocation of the accounting settings updating function by a fourth process that is executing in the second VOSE, determining in which VOSE of the plurality of VOSEs the fourth process is executing; and

in response to determining that the fourth process is executing in the second VOSE, updating the second accounting settings;

wherein the accounting settings updating function is implemented by the operating system kernel instance; and

wherein the first accounting settings are separate from the second accounting settings.

18. Kassan does not teach the ability to update accounting settings. Kassan teaches that the type of accounting information applicable to a job can but platform or installation specific (col 1 lines 47-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kassan by including a second process to modify the accounting settings that are logged to the files. One would be motivated by the desire to have the ability to change the type of information that is stored.

19. Regarding claim 9, Kassan teaches in response to the ending of execution of the first process, recording, in a second SALF stored in a file system that is associated with a global operating system environment (OSE) that comprises the plurality of VOSEs, second accounting information about the first process; wherein the second SALF is separate from the first SALF (col 1 line 65 to col 2 line 5, wherein different information can be logged to different files).

20. Regarding claim 10, Kassan teaches, further comprising:

in response to determining that the first process executed in the first VOSE, determining, based on first accounting settings that are associated with the first VOSE, one or more first specified accounting information aspects of a plurality of accounting information aspects (col 1 lines 46-51); and

determining, based on second accounting settings that are associated with the global OSE, one or more second specified accounting information aspects of the plurality of accounting information aspects (col 2 lines 2-5);

wherein recording the first accounting information comprises recording aspects of accounting information that correspond to the one or more first specified accounting information aspects (col 1 lines 61-64);

wherein recording the second accounting information comprises recording aspects of accounting information that correspond to the one or more second specified accounting information aspects (col 2 lines 2-5); and

wherein the one or more first specified accounting information aspects are separate from the one or more second specified accounting information aspects (col 2 lines 5-11, wherein the information can be written to separate files).

21. Regarding claim 12, Kassan teaches that the second accounting information indicates an identity of a VOSE in which the first process executed (col 1 lines 44-60).

22. Regarding claim 37, Armstrong teach that the operating system kernel instance exists in a global zone that contains the plurality of VOSEs ([0035], wherein the hypervisor sits one level below the partitioned OS kernels 204A-204D).

23. Armstrong does not explicitly teach that the operating system kernel instance determines in which VOSE of the plurality of VOSES the first process executed in response to the first process invoking an exit function of the operating system kernel instance. Armstrong does teach that all commands or instructions generated at higher levels must pass through the hypervisor before execution ([0034]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that hypervisor (i.e. kernel) would be able to determine the specific VOSE when a process invokes an exit.

24. Regarding claims 13-19, 21-34, 36, 38-39, they are the machine-readable medium and apparatus claims of claims 1-10, 12, and 37 above. Therefore they are rejected for the same reasons as claims 1-10, 12, and 37 above.

Response to Arguments

25. Applicant's arguments with respect to claims 1-10, 12-19, 21-34, and 36-39 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC C. WAI whose telephone number is (571)270-1012. The examiner can normally be reached on Mon-Fri, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric C Wai/
Examiner, Art Unit 2195